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International Notes

Update: Dracunculiasis Eradication – Ghana and Nigeria, 1990

Dracunculiasis (guinea worm disease) is a disabling infection that each year affects an estimated 5 million persons in 17 African countries and parts of India and Pakistan (*1–3*). This disease is contracted only by persons who drink water contaminated by tiny copepods containing larval stages of the parasite *Dracunculus medinensis*. The infection can be prevented by providing safe sources of drinking water, teaching populations at risk to boil water or filter it through a fine cloth, or treating the water with temephos (Abate®*). Efforts to eradicate dracunculiasis began in 1981, immediately before the start of the International Drinking Water Supply and Sanitation Decade. This report summarizes the progress of guinea worm eradication programs (GWEPs) in Ghana and Nigeria.

Ghana and Nigeria established GWEPs in December 1987 and May 1988, respectively. Of the 17 countries in Africa with endemic dracunculiasis, Ghana and Nigeria have the highest known prevalences of the disease. During the mid-1980s, Ghana and Nigeria each reported approximately 4000 cases of the disease to the World Health Organization (WHO) annually, based on passive reporting. In 1991, both countries began using a system of monthly reporting of dracunculiasis cases by trained villagers who reside in the communities where the disease is endemic. From their inception, the GWEPs in Ghana and Nigeria have emphasized health education, use of cloth filters, and improvements in rural water supplies as the main interventions against dracunculiasis.

The Ghanaian and Nigerian GWEPs set December 1993 and December 1995, respectively, as target dates for eradicating dracunculiasis. These national programs are assisted by the Global 2000 Project of the Carter Center, Inc.; the WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis at

*Use of trade names is for identification only and does not imply endorsement by the Public Health Service or the U.S. Department of Health and Human Services.

Dracunculiasis – Continued

CDC; the United Nations Children's Fund Lagos Office (Nigeria); the U.S. Agency for International Development (Ghana); and the Japanese International Cooperation Agency.

Ghana

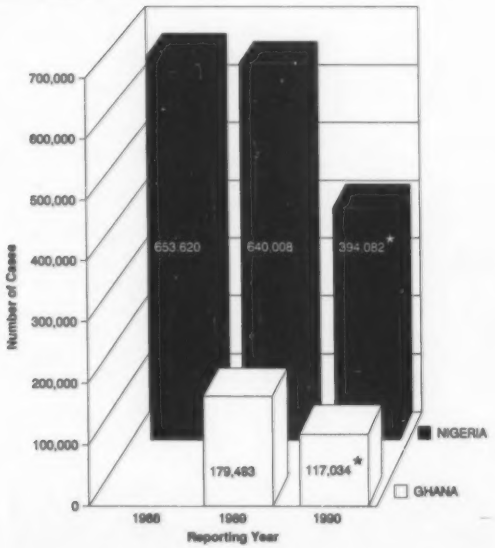
In June 1988, the Ghanaian head of state made a highly publicized tour of 21 villages with endemic dracunculiasis and instructed inhabitants about the disease and about the proper use of cloth filters. In late 1989, the first national village-by-village search by the Ghanaian GWEP identified 179,483 cases of dracunculiasis in 6515 villages (Figure 1). The search included 19,759 villages (92% of all villages in the country).

In late 1990, Ghana used trained village health workers to conduct house-to-house case counts in all villages known to have endemic dracunculiasis. Endemic dracunculiasis was detected in 351 villages that had not reported any cases in 1989. Nonetheless, for 1990, the provisional number of villages with endemic dracunculiasis declined to 4768, 26.9% fewer than in 1989. The provisional number of cases for 1990 was 117,034, a reduction of 34.8% (Figure 1).

Nigeria

The Nigerian GWEP has given priority to a nationwide village-by-village search for cases to ascertain the extent and distribution of dracunculiasis. The first search was conducted from August 1988 through March 1989 (in individual states the village-by-village search lasted 1–3 weeks). In 5879 villages with endemic dracunculiasis,

FIGURE 1. Cases of dracunculiasis detected during national surveys – Nigeria, 1988–1990, and Ghana, 1989–1990



*Provisional total.

Dracunculiasis — Continued

653,620 cases were identified for July 1987–June 1988 (reported for 1988) (Figure 1). This search, which covered an estimated 80% of the 90,000 villages in Nigeria, was limited by inadequate transportation and lack of access during the rainy season. The second national search identified 640,008 cases in 5932 villages with endemic dracunculiasis for July 1988–June 1989 (reported for 1989) (Figure 1). Together, these two searches covered an estimated 90% of Nigeria's rural population. In March 1989, the Nigerian government announced that it would give priority to dracunculiasis-affected villages in all nationally or externally funded rural water supply projects.

The third and latest search, conducted during October 1990–March 1991, was limited to those villages known to have endemic dracunculiasis; virtually all such villages were visited. This search, which also included health education about dracunculiasis in many villages with endemic disease, identified a provisional 394,082 cases in 5238 villages for July 1989–June 1990, a 38.4% reduction in cases from the previous year (Figure 1).

Reported by: Ministry of Health, Ghana. Federal Ministry of Health, Nigeria. Global 2000, Inc, Emory Univ Carter Center, Inc, Atlanta, Georgia. WHO Collaborating Center for Research, Training, and Eradication of Dracunculiasis. Div of Parasitic Diseases, Center for Infectious Diseases, CDC.

Editorial Note: This report summarizes the first evidence of a substantial decline in dracunculiasis in Africa since the international eradication campaign began in the early 1980s. The dramatic reduction in the number of cases identified in Ghana and Nigeria probably resulted from increased public awareness, health education efforts, and targeted rural water supply measures. Temephos has been used only in limited areas within both countries. The experience gained from the programs in Ghana and Nigeria and from the eradication effort in Pakistan (*4*) should benefit other African countries that are beginning eradication efforts.

Information from programs in Ghana and Nigeria, together with the imminent eradication of the disease in India and Pakistan and identification of a provisional total of approximately 40,000 cases during the first national search for cases in Burkina Faso (the only other country where the disease occurs nationwide), provides strong encouragement to other countries with endemic dracunculiasis. In 1986, the World Health Assembly (WHA) chose dracunculiasis as the next disease to be eradicated after smallpox; in 1989, WHA adopted a goal of dracunculiasis eradication during the 1990s. However, in 1988, the African Ministers of Health had resolved to eradicate the disease from that continent by 1995. The progress in reducing the incidence of dracunculiasis in Ghana and Nigeria, the two countries with the highest known prevalences in Africa, supports the goal of dracunculiasis eradication by 1995.

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Epidemiologic Notes and Reports

Elevated Intraoperative Blood Carboxyhemoglobin Levels in Surgical Patients — Georgia, Illinois, and North Carolina

In October 1990, three hospitals, one each in Georgia, Illinois, and North Carolina, reported 26 episodes of elevated blood carboxyhemoglobin (COHb) levels (normal: <3% in a nonsmoker, <10% in a smoker) during surgery in patients with no known carbon monoxide (CO) exposure. All three hospitals are large, medical-school–affiliated, training institutions. Hospital A (Georgia) reported 15 episodes from January 1987 through September 1989; hospital B (North Carolina), eight episodes from January through October 1990; and hospital C (Illinois), three episodes from January through September 1990. All of the episodes were detected during routine blood gas analyses that included COHb measurements (co-oximetry). In eight episodes, peak COHb levels were >20%. Usually, when an elevated COHb level was detected intraoperatively, 100% oxygen was administered, an alternate gas source was instituted, and COHb levels returned to normal. No deaths or serious complications were reported.

To determine the extent and potential source of the problem and to identify risk factors for developing an elevated intraoperative COHb level, hospitals B and C conducted independent investigations and reported the findings to CDC. In Georgia, the Fulton County Health Department, the Georgia Department of Human Resources, and CDC conducted an epidemiologic investigation at hospital A. For this investigation, a case was defined as an isolated intraoperative COHb level ≥8% (nonsmoker) or ≥20% (smoker) in any patient undergoing general anesthesia from January 1987 through October 1990. Of approximately 16,000 surgical patients for whom intraoperative COHb levels were recorded, 15 (0.1%) met the case definition.

Potential risk factors were evaluated by a case-control study. Each case-patient was compared with two randomly selected control-patients (i.e., any surgical patient with an intraoperative COHb level <3% who underwent general anesthesia the same year as the case-patient). Case- and control-patients were similar in sex, mean age, smoking history, mean duration of anesthesia, and severity of illness as measured by American Society of Anesthesia class. Case-patients were more likely than control-patients to have had their operations performed on a Monday or Tuesday (odds ratio [OR] = 6.6, 95% confidence interval [CI] = 1.4–33.2), in a particular operating room that was routinely inactive during weekends (OR = 5.7, 95% CI = 1.1–32.2), or after the anesthesia equipment had not been used for ≥24 hours (OR = 79.8, 95% CI = 6.8–2240.6).

Although routine sampling of the anesthesia circuits was not performed at hospital A while cases were occurring, intermittent measurements in the 16 months following the last case have not detected elevated CO in the anesthesia circuits. At hospital B, elevated levels of CO >1000 parts per million (ppm) were detected in some anesthesia circuits while cases were occurring.

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Carboxyhemoglobin Levels — Continued

and Drug Administration. Div of Field Svcs, Epidemiology Program Office; Epidemiology Br, Hospital Infections Program, Center for Infectious Diseases, CDC.

Editorial Note: Elevated COHb levels can be detected in persons with CO poisoning from exposure to smoke or automobile exhaust (*1*). CO toxicity occurs when CO binds to hemoglobin and causes subsequent tissue hypoxia. CO levels as low as 0.05% (500 ppm) in inhaled air can result in COHb levels as high as 20% (*2*). Signs and symptoms of CO toxicity are directly related to the duration and magnitude of exposure to CO and may occur at levels as low as 10%; levels >60% are often fatal (*1–3*). Although most case-patients at hospital A had peak COHb levels >10%, and some >30%, none were considered to be symptomatic when emerging from anesthesia.

Although the mechanism of CO production in the cases presented in this report is unknown, at least two possible explanations exist: 1) contamination of the anesthetic gases or 2) a chemical interaction between the anesthetic gases and the CO_2 absorbent. At hospital A, even though cases were clustered in one operating room, evidence did not support a tainted gas supply; the same gas source and distribution system served all operating rooms and chemical evaluation of the gas for contaminants was negative. Potential chemical interaction of the anesthetic gases and the CO_2 absorbent was supported by the association of cases with exposure to anesthesia machines that had not been used for ≥24 hours. Previous reports have documented an interaction between certain anesthetic gases (e.g., trichloroethylene—a gas no longer used) and the CO_2 absorbent to produce CO; there may be a potential for such a reaction associated with new agents currently in use (*4,5*).

Until the exact mechanism of CO production is identified, the three hospitals have initiated the following actions to minimize the risk of intraoperative anesthesia-associated CO exposure: 1) flushing CO_2 canisters with high-flow (about 30 L per minute) oxygen for at least 60 seconds before each anesthetic procedure; 2) replacing CO_2 absorbent canisters that have not been used within 24 hours; and 3) using high, fresh gas flows (≥5 L per minute) during anesthesia. Since implementation of these measures, no further cases have been detected.

Since co-oximetry is not routinely performed at all institutions, and neither routine arterial blood gas analysis nor pulse oximetry reliably detect COHb, the extent of this problem is unknown (*6*). To further characterize this problem, physicians are requested to report episodes of unexplained intraoperative COHb level elevations among surgical patients through state health departments to the Epidemiology Branch, Hospital Infections Program, Center for Infectious Diseases, Mailstop C-10, CDC, 1600 Clifton Road, NE, Atlanta, GA 30333; telephone (404) 639-3407.

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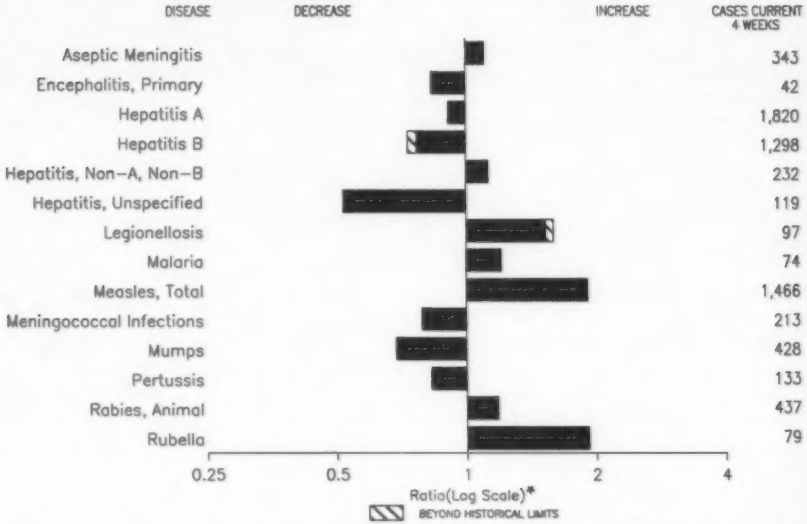
FIGURE I. Notifiable disease reports, comparison of 4-week totals ending April 13, 1991, with historical data — United States



*Ratio of current 4-week total to the mean of 15 4-week totals (from previous, comparable, and subsequent 4-week periods for the past 5 years). The point where the hatched area begins is based on the mean and two standard deviations of these 4-week totals.

TABLE I. Summary — cases of specified notifiable diseases, United States, cumulative, week ending April 13, 1991 (15th Week)

	Cum. 1991		Cum. 1991
AIDS	11,293	Measles: imported	38
Anthrax	-	indigenous	2,374
Botulism: Foodborne	5	Plague	-
Infant	14	Poliomyelitis, Paralytic*	-
Other	4	Psittacosis	26
Brucellosis	14	Rabies, human	-
Cholera	-	Syphilis, primary & secondary	12,093
Congenital rubella syndrome	7	Syphilis, congenital, age < 1 year	8
Diphtheria	1	Tetanus	4
Encephalitis, post-infectious	19	Toxic shock syndrome	100
Gonorrhea	160,797	Trichinosis	2
Haemophilus influenzae (invasive disease)	1,121	Tuberculosis	5,439
Hansen Disease	32	Tularemia	21
Leptospirosis	23	Typhoid fever	84
Lyme Disease	1,263	Typhus fever, tickborne (RMSF)	14

*No cases of suspected poliomyelitis have been reported in 1991; none of the 6 suspected cases in 1990 have been confirmed to date. Five of the 13 suspected cases in 1989 were confirmed and all were vaccine associated.

TABLE II. Cases of selected notifiable diseases, United States, weeks ending April 13, 1991, and April 14, 1990 (15th Week)

Reporting Area	AIDS	Aseptic Meningitis	Encephalitis		Gonorrhea		Hepatitis (Viral), by type				Legionellosis	Lyme Disease
			Primary	Post-infectious			A	B	NA,NB	Unspecified		
	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	11,293	1,396	156	19	160,797	196,884	7,348	4,550	826	403	324	1,263
NEW ENGLAND	556	59	8	-	4,297	5,448	169	260	38	11	29	43
Maine	22	4	3	-	37	79	5	7	2	-	-	-
N.H.	15	3	-	-	80	71	15	8	3	-	1	3
Vt.	8	5	-	-	16	22	9	2	3	-	-	1
Mass.	348	21	3	-	1,773	2,068	94	207	24	9	27	29
R.I.	19	22	-	-	343	276	25	12	4	2	1	10
Conn.	144	4	2	-	2,048	2,932	21	24	2	-	-	-
MID. ATLANTIC	3,015	178	13	6	18,774	26,897	551	416	67	10	95	1,009
Upstate N.Y.	456	86	6	4	3,528	3,768	351	189	44	4	35	845
N.Y. City	1,554	9	-	-	6,330	11,592	25	6	-	-	3	-
N.J.	674	-	-	-	3,146	4,556	72	114	8	-	7	164
Pa.	331	83	7	2	5,770	6,981	103	107	15	6	50	-
E.N. CENTRAL	864	253	47	4	31,042	38,556	764	542	115	17	58	46
Ohio	192	92	13	1	9,714	11,779	135	132	66	7	32	29
Ind.	62	26	5	1	3,204	3,274	129	62	1	-	3	-
Ill.	393	41	10	2	9,484	11,897	264	56	9	1	1	-
Mich.	150	85	18	-	7,231	9,157	110	181	37	9	16	17
Wis.	67	9	1	-	1,409	2,449	126	111	2	-	6	-
W.N. CENTRAL	299	96	7	1	8,085	10,266	911	198	94	7	15	9
Minn.	67	19	5	-	830	1,236	112	16	7	1	3	2
Iowa	27	22	-	1	533	829	24	10	6	1	-	5
Mo.	157	36	-	-	4,951	5,994	210	147	78	3	7	-
N. Dak.	4	-	-	-	11	45	13	2	2	1	-	-
S. Dak.	-	4	2	-	118	56	385	1	-	-	3	-
Nebr.	17	7	-	-	614	502	141	11	-	-	2	-
Kans.	27	8	-	-	1,028	1,604	26	11	1	1	-	2
S. ATLANTIC	2,661	334	30	7	48,366	54,307	490	1,040	132	88	40	44
Del.	22	8	-	-	659	722	5	16	4	2	-	10
Md.	246	37	4	-	4,715	5,462	112	146	27	6	11	15
D.C.	179	12	-	-	3,076	2,965	34	36	1	1	-	-
Va.	217	60	8	-	4,804	5,257	58	73	7	64	4	8
W. Va.	10	2	1	-	354	399	9	27	1	3	-	2
N.C.	101	37	10	-	9,205	9,236	61	174	54	-	6	6
S.C.	107	10	-	-	3,489	4,557	13	249	15	2	7	-
Ga.	481	29	5	1	12,514	12,152	59	128	6	-	2	2
Fla.	1,298	139	2	6	9,550	13,557	139	191	17	10	10	1
E.S. CENTRAL	304	83	7	-	14,616	16,370	68	337	91	3	20	30
Ky.	52	21	2	-	1,424	1,897	8	55	5	2	11	14
Tenn.	85	16	4	-	5,796	5,336	42	236	82	-	6	13
Ala.	94	30	1	-	3,557	5,390	17	45	4	1	3	3
Miss.	73	16	-	-	3,839	3,747	1	1	-	-	-	-
W.S. CENTRAL	962	109	9	-	17,636	19,996	1,009	472	25	58	14	19
Ark.	42	26	1	-	1,981	2,599	121	32	1	2	2	7
La.	180	8	1	-	3,625	3,572	40	77	1	2	5	-
Okla.	48	1	3	-	1,828	1,796	117	82	14	8	4	12
Tex.	692	74	4	-	10,202	12,029	731	281	9	46	3	-
MOUNTAIN	304	56	8	1	3,061	4,230	1,334	314	41	71	29	3
Mont.	5	2	-	-	22	45	46	27	2	4	1	-
Idaho	5	-	-	-	50	30	22	34	-	-	3	-
Wyo.	6	-	-	-	38	50	72	5	-	-	-	3
Colo.	126	17	1	1	559	1,192	127	46	10	9	4	-
N. Mex.	26	6	-	-	365	313	437	62	6	23	1	-
Ariz.	55	17	7	-	1,268	1,672	421	62	5	29	10	-
Utah	19	6	-	-	113	126	102	16	8	6	4	-
Nev.	62	8	-	-	646	802	107	62	10	-	6	-
PACIFIC	2,328	228	27	-	14,920	20,814	2,052	971	223	138	24	60
Wash.	117	-	-	-	1,257	1,964	194	146	53	8	1	-
Oreg.	53	-	-	-	577	774	118	93	34	2	1	-
Calif.	2,100	205	27	-	12,656	17,588	1,661	707	126	127	21	60
Alaska	8	5	-	-	226	357	69	9	8	1	-	-
Hawaii	50	18	-	-	204	131	10	16	2	-	1	-
Guam	-	-	-	-	-	79	-	-	-	-	-	-
P.R.	490	70	-	1	168	347	31	129	27	17	-	-
V.I.	2	-	-	-	168	148	-	3	-	-	-	-
Amer. Samoa	-	-	-	-	-	38	-	-	-	-	-	-
C.N.M.I.	-	-	-	-	-	61	-	-	-	-	-	-

N: Not notifiable U: Unavailable C.N.M.I.: Commonwealth of the Northern Mariana Islands

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 13, 1991, and April 14, 1990 (15th Week)

Reporting Area	Malaria	Measles (Rubeola)					Menin-gococcal Infections	Mumps		Pertussis			Rubella		
		Indigenous		Imported*		Total									
	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	Cum. 1991	1991	Cum. 1991	1991	Cum. 1991	Cum. 1990	1991	Cum. 1991	Cum. 1990
UNITED STATES	257	333	2,374	1	38	5,651	714	95	1,243	24	596	815	14	216	219
NEW ENGLAND	20	1	7	-	2	110	53	-	11	6	83	97	-	1	3
Maine	1	-	-	-	-	27	4	-	-	-	12	1	-	-	-
N.H.	2	-	-	-	-	8	6	-	3	-	11	10	-	1	-
Vt.	1	1	5	-	-	1	8	-	-	-	3	3	-	-	-
Mass.	10	-	-	-	-	5	27	-	-	6	54	75	-	-	-
R.I.	3	-	-	-	-	22	-	-	2	-	-	-	-	-	1
Conn.	3	-	2	-	2	47	8	-	6	-	3	8	-	-	2
MID. ATLANTIC	18	5	1,166	-	-	566	65	4	133	-	67	197	-	96	2
Upstate N.Y.	6	-	1	-	-	240	37	2	47	-	38	160	-	88	1
N.Y. City	3	-	60	-	-	65	2	-	-	-	-	-	-	-	-
N.J.	5	-	104	-	-	32	9	-	43	-	1	12	-	-	-
Pa.	4	5	1,001	-	-	229	17	2	43	-	28	25	-	8	1
E.N. CENTRAL	22	-	47	-	4	2,303	101	1	126	-	100	221	8	15	15
Ohio	6	-	-	-	1	210	35	-	27	-	37	36	-	-	-
Ind.	2	-	-	-	-	175	7	-	3	-	20	38	-	1	-
Ill.	7	-	20	-	-	966	27	-	57	-	18	78	-	3	14
Mich.	7	-	25	-	-	332	26	1	35	-	19	31	8	11	-
Wis.	-	-	2	-	3	620	6	-	4	-	6	38	-	-	1
W.N. CENTRAL	5	2	8	-	1	160	43	5	48	6	47	27	-	5	-
Minn.	-	-	1	-	1	39	9	-	2	-	15	-	-	4	-
Iowa	2	2	7	-	-	21	2	2	9	-	4	3	-	-	-
Mo.	3	-	-	-	-	53	18	1	10	1	16	19	-	1	-
N. Dak.	-	-	-	-	-	-	1	-	-	-	1	1	-	-	-
S. Dak.	-	-	-	-	-	5	1	-	-	-	1	1	-	-	-
Nebr.	-	-	-	-	-	35	3	-	3	-	4	1	-	-	-
Kans.	-	-	-	-	-	7	9	2	24	5	6	2	-	-	-
S. ATLANTIC	60	5	175	-	9	328	126	50	425	1	33	84	2	11	11
Del.	1	1	16	-	-	6	-	-	2	-	-	2	-	-	-
Md.	18	2	58	-	-	42	16	8	100	1	7	19	2	10	-
D.C.	4	-	-	-	-	3	-	-	7	-	-	2	-	-	1
Va.	10	-	15	-	3	20	11	-	19	-	4	7	-	-	-
W. Va.	1	-	-	-	-	6	4	-	8	-	6	7	-	-	-
N.C.	2	1	1	-	-	3	28	-	76	-	7	11	-	-	-
S.C.	4	-	12	-	-	1	19	3	78	-	-	3	-	-	-
Ga.	5	-	-	-	-	6	26	-	12	-	6	9	-	-	-
Fla.	15	1	73	-	6	241	22	39	123	-	3	4	-	1	10
E.S. CENTRAL	2	-	4	-	-	48	57	1	28	-	19	28	-	-	1
Ky.	1	-	-	-	-	2	22	-	-	-	-	-	-	-	-
Tenn.	-	-	4	-	-	18	17	-	13	-	10	12	-	-	1
Ala.	1	-	-	-	-	4	18	1	3	-	9	14	-	-	-
Miss.	-	-	-	-	-	24	-	-	12	-	-	2	-	-	-
W.S. CENTRAL	15	-	-	-	5	558	55	11	151	-	14	10	-	1	-
Ark.	1	-	-	-	5	8	9	3	23	-	-	1	-	1	-
La.	2	-	-	-	-	-	16	1	10	-	7	1	-	-	-
Okla.	1	-	-	-	-	116	8	-	5	-	7	8	-	-	-
Tex.	11	-	-	-	-	434	22	7	113	-	-	-	-	-	-
MOUNTAIN	9	4	158	-	10	239	29	7	78	-	81	75	-	1	11
Mont.	1	-	-	-	-	1	4	-	-	-	-	-	-	-	5
Idaho	-	-	-	-	2	16	6	-	5	-	17	6	-	-	3
Wyo.	-	-	-	-	-	-	1	-	3	-	3	-	-	-	-
Colo.	3	-	-	-	1	24	4	1	17	-	31	48	-	-	2
N. Mex.	1	1	75	-	3	65	4	N	N	-	12	3	-	-	-
Ariz.	4	-	71	-	-	83	6	4	38	-	8	10	-	-	-
Utah	-	2	2	-	4	-	-	2	11	-	10	4	-	-	-
Nev.	-	1	10	-	-	50	4	-	4	-	-	4	-	1	1
PACIFIC	106	316	809	1	7	1,339	185	16	243	11	152	96	4	86	176
Wash.	8	-	1	-	3	39	20	2	65	4	41	29	-	-	-
Oreg.	2	1	8	-	-	108	21	N	N	-	27	7	-	-	-
Calif.	94	315	798	1†	4	1,128	137	14	167	1	55	50	4	85	172
Alaska	-	-	-	-	-	62	6	-	4	-	4	-	-	-	-
Hawaii	2	-	2	-	-	2	1	-	7	6	25	10	-	1	4
Guam	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
P.R.	1	3	6	-	1	472	14	1	7	1	8	4	-	1	-
V.I.	-	U	-	U	-	2	-	U	4	U	-	-	U	-	-
Amer. Samoa	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-
C.N.M.I.	-	U	-	U	-	-	-	U	-	U	-	-	U	-	-

*For measles only, imported cases includes both out-of-state and international importations.
N: Not notifiable U: Unavailable †International §Out-of-state

TABLE II. (Cont'd.) Cases of selected notifiable diseases, United States, weeks ending April 13, 1991, and April 14, 1990 (15th Week)

Reporting Area	Syphilis (Primary & Secondary)		Toxic-shock Syndrome	Tuberculosis		Tula-remia	Typhoid Fever	Typhus Fever (Tick-borne) (RMSF)	Rabies, Animal
	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1990	Cum. 1991	Cum. 1991	Cum. 1991	Cum. 1991
UNITED STATES	12,093	13,840	100	5,439	5,930	21	84	14	1,337
NEW ENGLAND	323	548	6	131	120	1	9	2	2
Maine	-	5	3	-	-	-	1	-	-
N.H.	3	30	1	-	1	-	-	-	1
Vt.	1	1	-	1	2	-	-	-	-
Mass.	168	193	2	65	53	1	8	2	-
R.I.	16	1	-	16	25	-	-	-	-
Conn.	135	318	-	49	39	-	-	-	1
MID. ATLANTIC	2,078	2,863	15	1,238	1,481	-	11	-	415
Upstate N.Y.	103	191	7	84	151	-	4	-	144
N.Y. City	1,029	1,481	-	766	885	-	2	-	-
N.J.	384	464	-	238	236	-	4	-	191
Pa.	562	727	8	150	209	-	1	-	80
E.N. CENTRAL	1,363	926	18	618	530	1	8	-	20
Ohio	155	140	11	89	64	-	2	-	4
Ind.	27	9	-	34	34	-	-	-	-
Ill.	696	355	3	338	276	-	-	-	3
Mich.	326	296	4	124	137	1	5	-	3
Wis.	159	126	-	33	19	-	1	-	10
W.N. CENTRAL	200	124	23	149	146	4	2	-	181
Minn.	23	32	7	27	22	-	2	-	56
Iowa	21	10	5	23	20	-	-	-	37
Mo.	127	58	5	67	67	4	-	-	4
N. Dak.	-	1	-	2	7	-	-	-	17
S. Dak.	1	-	1	11	4	-	-	-	46
Nebr.	1	3	1	5	10	-	-	-	8
Kans.	27	20	4	14	16	-	-	-	13
S. ATLANTIC	3,634	4,382	7	970	1,076	2	15	9	358
Del.	42	57	1	8	15	-	-	-	46
Md.	335	360	-	85	94	-	5	1	131
D.C.	222	264	-	60	37	-	1	-	5
Va.	300	219	2	95	98	-	3	-	71
W. Va.	9	5	-	26	17	-	1	-	21
N.C.	555	511	4	106	141	1	-	7	-
S.C.	409	256	-	114	130	-	-	-	25
Ga.	888	994	-	195	161	-	3	1	51
Fla.	874	1,716	-	281	383	1	2	-	8
E.S. CENTRAL	1,263	1,223	3	344	471	2	-	2	29
Ky.	27	24	1	91	116	1	-	1	6
Tenn.	487	490	2	42	132	1	-	-	8
Ala.	412	381	-	120	141	-	-	1	13
Miss.	337	328	-	91	82	-	-	-	-
W.S. CENTRAL	2,124	2,241	4	540	708	6	3	1	189
Ark.	122	147	2	55	71	4	-	-	12
La.	680	683	-	28	113	-	1	-	3
Okla.	45	60	2	39	55	2	-	1	62
Tex.	1,277	1,351	-	418	469	-	2	-	112
MOUNTAIN	203	236	10	173	122	4	4	-	27
Mont.	1	-	-	-	4	3	-	-	5
Idaho	3	4	-	2	3	-	-	-	1
Wyo.	1	1	-	2	1	1	-	-	17
Colo.	17	18	1	6	6	-	-	-	1
N. Mex.	45	16	3	35	26	-	-	-	1
Ariz.	117	156	3	83	61	-	3	-	2
Utah	3	2	3	25	3	-	-	-	-
Nev.	16	39	-	20	18	-	1	-	-
PACIFIC	905	1,297	14	1,276	1,276	1	32	-	116
Wash.	42	138	1	79	87	1	-	-	-
Oreg.	26	35	-	33	38	-	2	-	1
Calif.	834	1,108	13	1,089	1,082	-	29	-	111
Alaska	2	5	-	14	18	-	-	-	3
Hawaii	1	11	-	61	51	-	1	-	1
Guam	-	-	-	-	14	-	-	-	-
P.R.	118	150	-	46	29	-	-	-	7
V.I.	55	1	-	1	2	-	-	-	-
Amer. Samoa	-	-	-	-	6	-	-	-	-
C.N.M.I.	-	-	-	-	12	-	-	-	-

U: Unavailable

TABLE III. Deaths in 121 U.S. cities,* week ending April 13, 1991 (15th Week)

Reporting Area	All Causes, By Age (Years)						P&I**
	All Ages	≥65	45-64	25-44	1-24	<1	Total
NEW ENGLAND	622	431	109	57	8	17	42
Boston, Mass.	166	103	31	18	4	10	15
Bridgeport, Conn.	32	25	5	1	-	1	1
Cambridge, Mass.	15	13	1	1	-	-	2
Fall River, Mass.	22	19	3	-	-	-	2
Hartford, Conn.	67	46	14	6	-	1	2
Lowell, Mass.	25	20	4	1	-	-	3
Lynn, Mass.	16	12	2	2	-	-	-
New Bedford, Mass.	24	20	3	1	-	-	-
New Haven, Conn.	65	38	15	9	2	1	1
Providence, R.I.	57	41	11	5	-	-	2
Somerville, Mass.	7	6	1	-	-	-	1
Springfield, Mass.	37	24	7	3	1	2	2
Waterbury, Conn.	32	23	4	5	-	-	5
Worcester, Mass.	57	41	8	5	1	2	6
MID. ATLANTIC	2,702	1,823	445	302	62	68	158
Albany, N.Y.	60	43	8	3	-	6	9
Allentown, Pa.	20	16	4	-	-	-	1
Buffalo, N.Y.	105	78	15	5	4	3	5
Camden, N.J.	41	23	12	5	1	-	1
Elizabeth, N.J.	33	24	2	6	1	-	3
Erie, Pa.†	36	27	5	3	-	1	-
Jersey City, N.J.	62	43	12	3	2	2	3
New York City, N.Y.	1,276	843	195	175	36	27	62
Newark, N.J.	89	41	20	22	4	2	4
Paterson, N.J.	22	14	2	4	-	2	1
Philadelphia, Pa.	491	326	95	41	11	17	32
Pittsburgh, Pa.†	74	50	11	9	1	2	6
Reading, Pa.	45	31	10	4	-	-	5
Rochester, N.Y.	132	98	20	9	1	4	7
Schenectady, N.Y.	30	22	6	1	1	-	2
Scranton, Pa.†	25	21	3	1	-	-	3
Syracuse, N.Y.	83	66	14	3	-	-	6
Trenton, N.J.	33	24	6	1	-	2	3
Utica, N.Y.	20	12	4	4	-	-	2
Yonkers, N.Y.	25	21	1	3	-	-	3
E.N. CENTRAL	2,430	1,440	477	281	150	82	144
Akron, Ohio	56	33	15	2	3	3	-
Canton, Ohio	42	29	8	4	1	-	3
Chicago, Ill.	684	275	142	148	101	18	29
Cincinnati, Ohio	112	71	25	7	4	5	10
Cleveland, Ohio	131	79	33	10	2	7	4
Columbus, Ohio	170	116	36	4	5	9	3
Dayton, Ohio	110	78	21	4	5	2	5
Detroit, Mich.	226	127	49	28	8	14	5
Evansville, Ind.	37	27	7	2	1	-	3
Fort Wayne, Ind.	55	44	4	4	3	-	5
Gary, Ind.	23	16	3	4	-	-	-
Grand Rapids, Mich.	61	44	8	4	3	2	10
Indianapolis, Ind.	232	160	39	20	6	7	24
Madison, Wis.	38	23	7	5	2	1	-
Milwaukee, Wis.	132	98	25	7	1	1	13
Peoria, Ill.	42	26	8	4	1	3	2
Rockford, Ill.	40	26	10	2	-	2	5
South Bend, Ind.	62	39	10	12	1	-	10
Toledo, Ohio	110	80	16	6	1	7	9
Youngstown, Ohio	67	49	11	4	2	1	4
W.N. CENTRAL	752	549	118	46	15	23	42
Des Moines, Iowa	73	54	16	1	1	1	10
Duluth, Minn.	33	24	5	2	2	-	1
Kansas City, Kans.	28	21	3	1	1	1	-
Kansas City, Mo.	128	97	20	6	-	5	5
Lincoln, Nebr.	34	29	4	-	-	1	3
Minneapolis, Minn.	171	122	30	13	2	4	11
Omaha, Nebr.	78	58	11	4	4	1	6
St. Louis, Mo.	100	66	12	12	5	5	-
St. Paul, Minn.	58	43	12	3	-	-	3
Wichita, Kans.	49	35	5	4	-	5	3
S. ATLANTIC	1,418	848	316	171	42	39	93
Atlanta, Ga.	136	77	28	23	3	5	6
Baltimore, Md.	297	196	48	41	4	8	26
Charlotte, N.C.	125	70	36	9	3	7	4
Jacksonville, Fla.	119	74	30	10	2	3	7
Miami, Fla.	118	58	33	16	7	4	1
Norfolk, Va.	42	18	13	3	4	4	3
Richmond, Va.	76	46	19	8	1	2	7
Savannah, Ga.	40	32	4	3	1	-	11
St. Petersburg, Fla.	94	80	7	6	1	-	6
Tampa, Fla.	144	88	33	10	8	3	14
Washington, D.C.	183	79	54	40	7	3	8
Wilmington, Del.	44	30	11	2	1	-	-
E.S. CENTRAL	880	555	197	67	32	29	54
Birmingham, Ala.	105	70	23	7	2	3	3
Chattanooga, Tenn.	64	39	17	5	2	1	5
Knoxville, Tenn.	114	74	13	12	8	7	16
Louisville, Ky.	151	94	38	6	7	6	9
Memphis, Tenn.	156	95	28	18	6	9	7
Mobile, Ala.	110	76	24	6	3	1	4
Montgomery, Ala.	41	27	11	3	-	-	3
Nashville, Tenn.	139	80	43	10	4	2	7
W.S. CENTRAL	1,507	902	347	166	53	39	80
Austin, Tex.	68	42	17	5	3	1	6
Baton Rouge, La.	34	23	7	3	1	-	2
Corpus Christi, Tex.	52	31	11	4	4	2	2
Dallas, Tex.	197	107	51	25	6	8	8
El Paso, Tex.	75	55	12	7	-	1	6
Ft. Worth, Tex.	96	60	22	8	2	4	4
Houston, Tex.	345	178	98	46	11	12	23
Little Rock, Ark.	76	41	19	9	2	5	3
New Orleans, La.	169	99	37	23	9	1	-
San Antonio, Tex.	221	147	36	24	12	2	11
Shreveport, La.	64	45	11	5	1	2	5
Tulsa, Okla.	110	74	26	7	2	1	10
MOUNTAIN	788	531	156	52	22	27	57
Albuquerque, N.M.	91	71	12	4	3	1	4
Colo. Springs, Colo.	45	30	9	4	1	1	4
Denver, Colo.	115	79	18	7	3	8	16
Las Vegas, Nev.	137	88	30	10	5	4	14
Ogden, Utah	34	23	9	-	2	-	-
Phoenix, Ariz.	154	82	40	15	6	11	7
Pueblo, Colo.	27	20	6	1	-	-	3
Salt Lake City, Utah	52	34	14	3	1	-	2
Tucson, Ariz.	133	104	18	8	1	2	7
PACIFIC	1,960	1,321	347	192	60	33	144
Berkeley, Calif.	18	12	4	2	-	-	2
Fresno, Calif.	61	40	9	8	3	1	7
Glendale, Calif.	30	23	4	1	2	-	2
Honolulu, Hawaii	81	50	20	4	7	-	5
Long Beach, Calif.	105	68	17	14	2	4	18
Los Angeles, Calif.	523	347	84	60	22	5	24
Oakland, Calif.§	U	U	U	U	U	U	U
Pasadena, Calif.	36	26	7	1	-	2	2
Portland, Oreg.	118	85	24	7	1	1	7
Sacramento, Calif.	160	101	33	20	6	-	18
San Diego, Calif.	154	104	25	18	2	3	21
San Francisco, Calif.	184	116	36	25	4	3	5
San Jose, Calif.	176	127	32	10	4	3	18
Seattle, Wash.	154	105	25	11	6	7	3
Spokane, Wash.	58	37	12	6	1	2	5
Tacoma, Wash.	102	80	15	5	-	2	7
TOTAL	13,059††	8,400	2,512	1,334	444	357	814

*Mortality data in this table are voluntarily reported from 121 cities in the United States, most of which have populations of 100,000 or more. A death is reported by the place of its occurrence and by the week that the death certificate was filed. Fetal deaths are not included.

**Pneumonia and influenza.

†Because of changes in reporting methods in these 3 Pennsylvania cities, these numbers are partial counts for the current week. Complete counts will be available in 4 to 6 weeks.

††Total includes unknown ages.

§Report for this week is unavailable (U).

Current Trends

Perceptions about Sexual Behavior: Findings from a National Sex Knowledge Survey — United States, 1989

Perceptions of specific risk behaviors for sexually transmitted diseases (STDs) can influence socially accepted norms of sexual behavior and knowledge of STD risk among different demographic groups. This report summarizes findings from a national survey (conducted by The Kinsey Institute for Research in Sex, Gender, and Reproduction at Indiana University) that addressed perceptions regarding the prevalence of high-risk sexual behaviors (*1*).

During October 14–20, 1989, a multistage, stratified, probability sample of 1974 U.S. adults (persons ≥18 years of age) were interviewed in their homes by a private polling organization. Respondents were asked six questions in face-to-face interviews and 12 questions by anonymous, self-administered questionnaires in the presence of the interviewers. In the face-to-face interview, participants were asked to estimate the age at which the "average or typical American" first has sexual intercourse and to estimate the proportion of married men who have had an "extramarital affair." The self-administered questionnaire included items on the prevalence of heterosexual anal intercourse and male homosexual behavior. Refusal rates for the interview questions (Table 1, questions 1 and 2) were <1%, and for the self-administered questionnaire (Table 1, questions 3 and 4), 14%.

Most respondents (62% [95% confidence interval (CI) = ±2]) believed the "typical American" has first sexual intercourse at or before 15 years of age (Table 1, question 1). Women (29% [95% CI = ±3]) were more likely than men (21% [95% CI = ±3]) to believe the age at first intercourse was ≤13 years ($p<0.05$). Persons who were younger, reported lower income, or claimed less formal education consistently estimated younger ages at first intercourse (Figure 1, Table 1). More black respondents (41% [95% CI = ±7]) than white respondents (23% [95% CI = ±2]) estimated younger ages at first sexual intercourse (≤13 years; $p<0.05$).

Half the respondents believed that ≥50% of married men have had an "extramarital affair" (Table 1, question 2). Women (25% [95% CI = ±3]) were more likely than men (17% [95% CI = ±2]) and blacks (33% [95% CI = ±6]) were more likely than whites (19% [95% CI = ±2]) to estimate that a high percentage of married men (≥70%) have had an "extramarital affair." Respondents with lower income (26% [95% CI = ±3] vs. 18% [95% CI = ±3]) and with less formal education (26% [95% CI = ±4] vs. 22% [95% CI = ±3] vs. 18% [95% CI = ±3]) were more likely to estimate this behavior to be this prevalent. Separated and divorced respondents (34% [95% CI = ±7]) were the most likely to estimate this high prevalence, followed by single (24% [95% CI = ±4]) and married (18% [95% CI = ±2]) respondents.

More than one third (37% [95% CI = ±2]) estimated that ≤20% of U.S. women have ever had anal intercourse (Table 1, question 3); 28% (95% CI = ±2) indicated "don't know." Respondents estimating that ≥30% of U.S. women have had anal intercourse were more likely to be 18–44 years of age (43% [95% CI = ±3] vs. 24% [95% CI = ±3]), unmarried (except widowed) (45% [95% CI = ±4] vs. 34% [95% CI = ±3]), or black (43% [95% CI = ±7] vs. 34% [95% CI = ±3]). A "don't know" response was 2.4 times more likely from respondents aged ≥60 years (48% [95% CI = ±5]) than from those aged 18–44 years (20% [95% CI = ±2]); 1.4 times more likely from those without a

TABLE 1. Percentage of respondents choosing various response options — National Sex Knowledge Survey, 1989

Question[§]	Total sample (n = 1974)	Sex		Whit
		Male (n = 940)	Female (n = 1034)	(n = 15
1. Nowadays, what do you think is the age at which the *average* or *typical* American *first* has sexual intercourse?[¶]				
≤13 yrs	25.1	20.8	29.0**	22.7
14–15 yrs	36.5	40.1	33.2**	37.1
16–17 yrs	24.4	25.1	23.8	26.6
≥18 yrs	7.1	6.7	7.5	7.1
Don't know	6.9	7.3	6.5	6.5
2. Out of every 10 married American men, how many would you estimate have had an extramarital affair – that is, have been sexually unfaithful to their wives?[¶]				
≤20%	16.0	15.7	16.3	17.1
30%–40%	25.2	27.6	23.0**	25.9
50%–60%	28.9	30.8	27.1**	29.0
≥70%	20.9	16.6	24.8**	18.8
Don't know	9.0	9.3	8.8	8.6
3. Out of every 10 American women, how many would you estimate have had anal (rectal) intercourse?[††]				
≤20%	36.8	37.4	36.3	38.4
30%–40%	20.9	23.9	18.2**	20.0
≥50%	14.7	14.9	14.5	13.8
Don't know	27.6	23.8	31.0**	27.2
4. More than one out of four (25%) of American men have had a sexual experience with another male during either their teens or adult years.[††]				
True	21.3	22.9	19.8	19.5
False	42.5	45.9	39.5**	44.0
Don't know	36.2	31.2	40.7**	35.5

*Different superscripts denote statistical significance at $p<0.05$ level for educational differe

†"Other races" was not listed because the number of respondents was small (7% Hispanic or cautiously because blacks were not oversampled.

§Some response options and demographic categories have been collapsed.

¶<1% of sample did not respond to this question.

**$p<0.05$ for sex, race, and income.

††14% of sample did not respond to this question.

Source: The Kinsey Institute for Sex, Gender, and Reproduction, Indiana University, Bloom

tions to selected questions, by demographic characteristics

Race†		Annual income		Education*		
White (n=1586)	Black (n=211)	<$25,000 (n=716)	≥$25,000 (n=914)	No high school diploma (n=411)	High school graduate (n=675)	Some college (n=886)
22.7	41.3**	32.3	20.1**	32.7[a]	28.4[a]	19.0[b]
37.1	30.3**	33.8	40.9**	28.8[a]	36.3[b]	40.2[b]
26.6	12.3**	19.0	28.4**	17.3[a]	23.8[b]	28.2[c]
7.1	7.6	7.6	6.1	10.2[a]	5.3[b]	7.1[b]
6.5	8.5	7.3	4.5**	11.0[a]	6.2[b]	5.5[b]
17.1	13.7	14.6	15.5	14.1	17.5	15.7
25.9	18.5**	23.1	29.1**	18.0[a]	25.5[b]	28.4[b]
29.6	24.6	28.2	30.3	29.7	26.6	30.3
18.8	33.2**	25.6	18.4**	26.3[a]	21.5[b]	18.0[c]
8.6	10.0	8.5	6.7	11.9[a]	8.9[a,b]	7.6[b]
38.4	27.1**	34.4	40.1**	32.3[a]	36.7[b]	38.7[b]
20.6	23.4	18.8	23.3**	14.4[a]	20.3[b]	24.1[c]
13.8	19.2**	16.7	14.1	19.8[a]	13.6[b]	13.5[b]
27.2	30.3	30.1	22.5**	33.5[a]	29.4[a]	23.7[b]
19.9	25.9	22.6	19.7	24.2[a]	18.2[b]	22.4[a]
44.6	32.8	40.4	48.0**	35.7[a]	45.5[b]	43.1[b]
35.5	41.3	37.0	32.3**	40.1[a]	36.3[a,b]	34.5[b]

differences.

nic or other races, 2% not reported). Racial comparisons should be interpreted

Bloomington, Indiana.

Sexual Behavior — Continued

high school diploma (34% [95% CI = ±5]) than from those with some college education (24% [95% CI = ±3]); 1.3 times more likely from those reporting an annual income <$25,000 (30% [95% CI = ±4]); and 1.3 times more likely from women (31% [95% CI = ±3]).

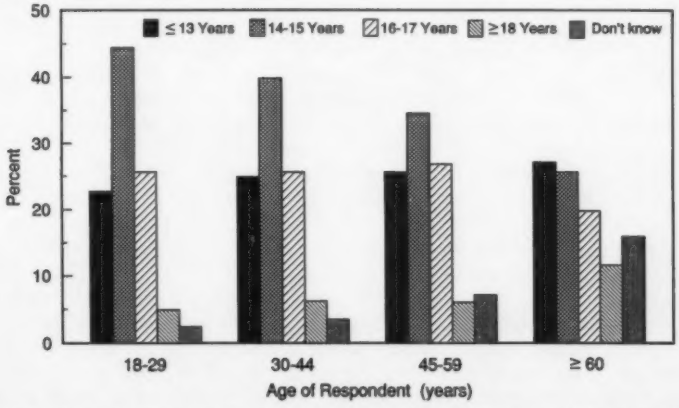
When asked if 25% of U.S. men have had a homosexual experience, 36% of respondents (95% CI = ±2) answered "don't know" (Table 1, question 4). This response was most common among those widowed (52% [95% CI = ±8]), aged ≥60 years (47% [95% CI = ±5]), black (41% [95% CI = ±7]), and without a high school diploma (40% [95% CI = ±5]). Of the remaining 64% of respondents, two thirds estimated that <25% of U.S. men have had a homosexual experience.

Reported by: JM Reinisch, PhD, CA Hill, PhD, M Ziemba-Davis, SA Sanders, PhD, The Kinsey Institute for Research in Sex, Gender, and Reproduction, Indiana Univ, Bloomington, Indiana. The Roper Organization, New York City. Behavioral Studies Br, Div of STD/HIV Prevention, Center for Prevention Svcs, CDC.

Editorial Note: Collection of information on perceptions, knowledge, and behavior is difficult. Because race, education, and income are correlated and blacks were not oversampled, the results in this report that are related to these variables should be interpreted cautiously. Some groups, such as teenagers, have higher rates of certain risk behaviors for STD transmission and high rates of STDs (*2*). The data in this report suggest that the perception that certain high-risk behaviors are more prevalent is also more common in some groups. These perceptions may reinforce continued practice of these high-risk behaviors.

Since perceptions of socially accepted norms influence behaviors (*3*), subjective estimates of the prevalence of specific sexual behaviors have substantial public health importance. For younger persons in particular, perceptions of the "average" age at which others initiate sexual activity is likely to affect sexual decision making. Accordingly, public health strategies directed toward alteration of perceived norms could influence behavior (*4*). Specifically, interventions related to sexual behavior may potentially reduce disease transmission (*5*).

FIGURE 1. Estimated average age at first sexual intercourse, by respondent age — National Sex Knowledge Survey, 1989



Source: The Kinsey Institute for Sex, Gender, and Reproduction, Indiana University, Bloomington, Indiana.

Sexual Behavior — Continued

Disseminating accurate data from surveys of sexual behavior can assist in changing perceptions of norms regarding high-risk sexual behaviors. The dissemination of such information represents a potential intervention by providing alternative perceptions that could lead to changes in behavioral expectations, expectations about what is acceptable to others, and risky behavior.

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Epidemiologic Notes and Reports

Importation of Cholera from Peru

On April 9, 1991, a U.S. physician attending a conference in Lima, Peru, had onset of diarrhea. He reported a maximum of eight watery stools in 24 hours and experienced no other symptoms except moderate weakness. The diarrhea lasted 5 days. After arriving in Peru on April 5, he had eaten all his meals, including a cold crab meat appetizer 2 days before onset of illness, in his hotel or at events catered solely for the conference participants. He also consumed ice and municipal water that the hotel reported had been purified. Culture of a stool sample obtained on April 11, after his return to the United States, yielded toxin-producing *Vibrio cholerae* O1, serotype Inaba, biotype El Tor. His family did not accompany him to Peru and has remained well.

Reported by: JA Wilber, MD, State Epidemiologist, Georgia Dept of Human Resources. Enteric Diseases Br, Div of Bacterial and Mycotic Diseases, Center for Infectious Diseases, CDC.

Editorial Note: An epidemic of cholera is occurring in Peru, Ecuador, and Colombia, and there is potential for spread to other countries. Although the risk for cholera is small for U.S. residents traveling in cholera-infected areas (*1*), some U.S. travelers nonetheless may become infected (*2*). The best protection is provided by scrupulous adherence to recommendations to prevent traveler's diarrhea (*3,4*); particularly, raw seafood and potentially contaminated water should be avoided. Optimally, travelers should drink only water that they have treated (e.g., by adding iodine or boiling) themselves. In addition, ice, which may be made from contaminated water, should be avoided. Commercially bottled water has transmitted cholera (*5*), but *carbonated* bottled water has a low pH and permits only brief survival of *V. cholerae* O1.

Most *V. cholerae* O1 infections cause no symptoms or only mild to moderate diarrhea, but in a small proportion of cases the illness can be life-threatening. Travelers who develop severe watery diarrhea or diarrhea and vomiting during or following travel to an area with known cholera should seek medical attention

Cholera – Continued

immediately. Treatment of cholera with proper oral and, if indicated, intravenous rehydration is simple and highly effective.

The risk for secondary transmission of cholera in the United States is extremely small (*2*).

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The data in this report are provisional, based on weekly reports to CDC by state health departments. The reporting week concludes at close of business on Friday; compiled data on a national basis are officially released to the public on the succeeding Friday. Accounts of interesting cases, outbreaks, environmental hazards, or other public health problems of current interest to health officials, as well as matters pertaining to editorial or other textual considerations should be addressed to: Editor, *Morbidity and Mortality Weekly Report*, Mailstop C-08, Centers for Disease Control, Atlanta, Georgia 30333; telephone (404) 332-4555.

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